

# MISSOURI CONSERVATIONIST

January  
2006

Volume 67  
Issue 1

*Serving Nature & You*



# Vantage Point

## Fish Castles

**T**urn back the pages of time and try to imagine what would be the one thing that a fish and a medieval king have in common. The answer? Both would make sure there was plenty of water in the castle's moat!

Actually most fish would want more than just ample water for their castle. They would also demand other elements necessary for their survival, such as food and protection from predators.

Many of us have gone through the process of buying or building our own "castle." Generally, we get to choose the community, neighborhood or rural property where we want to reside. Missourians have a fair amount of control over their home environment.

Fish do not. When a fish is looking for a home, it seeks habitat that provides shelter from harsh conditions, a place to rest, a place to spawn and a place to eat. Unlike us, fish don't have many choices about where they live. Their home is the underwater habitat that is available. For some fish, their home territory may be less than a mile of stream.

Many Missourians, particularly anglers, are aware of the places where larger, adult fish live. However, people pay little attention to young fish and where they spend their early lives. Homes for young fish are called nurseries, just like the hospital wards where our precious babies receive special treatment. A fish nursery is critical to the health of young fish and to their contribution to the adult population.

Creation of fish habitat depends on natural forces like willow growth on sand bars, cottonwoods on stream banks, and the periodic reshaping of the floodplain by floods.

When people interfere with these natural processes, some important building blocks are omitted, and the castle can take on the appearance of a shanty. If the damage is severe, renovating a fish castle may require 50 to 100 years or more.

Many people experienced the heartbreak of water entering their homes during the 1993 flood. While you generally can't get too much water for a fish castle, you can get too much sediment that's carried by high water. Sediment is the number one pollutant of Missouri



CLIFF WHITE

streams. Add too much sediment to a stream and you get smothered riffles, suffocated eggs, clogged gills and buried fish food items.

When times get tough, some fish are mobile enough to search for a better aquatic landscape. And some species of fish willingly change their home by season, just like a fair number of Missouri's retirees. When we block fish movements with large dams, we keep stream fish away from critical shelter and spawning grounds.

What can we do to spruce up Missouri's fish castles?

Fish castle improvement involves upgrading our water and sewage treatment plants, keeping dirt in its place on our properties and construction sites with vegetated buffers, retention structures and terraces. Watersheds should be managed under best management practices, which include leaving or enhancing tree-lined banks along streams and reestablishing wetlands that are critical for maintaining adequate summer flows.

We are essentially the insurance policy for Missouri's fish castles. Fish are totally dependent on our actions for the quality of their homes, obligating us to dedicate some of our time, effort and monies toward habitat improvement. So, join a Stream Team, monitor water quality in a local creek for a class project, get involved in fish habitat issues as an angler group, and conduct business affairs in a sound manner. We can play a big part in making a fish's home its castle.

Sir Bassalot will appreciate our efforts!

**Steve Eder**, Fisheries Division Administrator

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# Reflections

## FIRST DEER AWARDS

Thanks for sponsoring the youth hunting program. Your events provide special times for families and friends to open up the many opportunities hunting provides. The responsibilities on the adult companion bring out the chance to remind ourselves of the safety requirements we must constantly adhere to when hunting, especially when we are the teachers.

Please be sure to remind successful youth hunters' adult companions of the certificate program. The chance to get a deer (or turkey) is quite a thrill for a youth. A certificate of achievement adds to a dream come true.

**Jennifer (13) & Arthur FitzGibbon (45),  
via Internet**

*Editor's Note: This past October, 10,577 deer were harvested during youth firearms season. The Department of Conservation sponsors the First Deer Award program,*

*which provides a framable certificate to commemorate a hunter's first harvest. Applications are available online at [mdc.mo.gov/documents/hunt/first\\_deer.pdf](http://mdc.mo.gov/documents/hunt/first_deer.pdf), or by calling the Department's Wildlife Division at 573/751-4115.*

## SNAKE STORY

We heard a story that we're hoping is not true. We were told the Conservation Department has released a bunch of rattlesnakes in Mo. because they are listed on the endangered species [list]. Also, it was said a fine of \$1000 would be placed on anyone killing a rattle-snake. The man who told this story had killed one that was lying in his yard and he narrowly missed stepping on it.

**Mr. & Mrs. Richard Buterbaugh, Rich Hill**

*Editor's Note: Though untrue, this rumor has circulated for a number of years. The Department has done studies on snakes, but no stocking*

*or reintroduction. Provisions in the Wildlife Code allow landowners to protect their property and destroy a snake, if necessary, unless it is an endangered species. The western fox snake, Mississippi green water snake and the massasauga rattlesnake are endangered species. If one of these is the species of concern, the property owner should contact a conservation agent for assistance.*

## DISCOVERING OUTSIDE IN

I always welcome the arrival of the *Conservationist*. Of special interest in the November 2005 issue were the articles for and about young people.

As a grandparent, I can say that our youngsters (ages 6 and 9) are inquisitive about nature and how it works. Seasonal visits to the woods and fields have prompted such questions as "Where do butterflies come from?" while observing a monarch on a flower, and "What is that hummingbird doing?" as it darts from one blossom to another. All of us should cultivate such curiosity [in children], answer questions and build a growing awareness of nature and why preserving it is important. As voting adults, they would be more knowledgeable and therefore more supportive of those candidates running for Congress and the presidency who take a public stand to protect what remains of the natural world and its biotic diversity.

**Clair L. Kucera, Columbia**

## BITTERSWEET MEMORIES

I read with great interest the article about bittersweet written by Mr. Johnson in the November 2005 issue of *Missouri Conservationist*. I am a retired English teacher and enjoy the outdoors, travel and everything connected with nature but no longer roam the woods for bittersweet since turning 80. Since getting my PC, however, I have continued enjoying the benefits of nature by writing about it.

In the 1980s, my husband's family



## A SHREWD CHOICE WHEN YOU NEED TO FLY

This juvenile red-tailed hawk stopped by Greg Lusk's backyard in Kansas City for a lunch of short-tailed shrew. Red-tailed hawks probably take a greater variety of prey than any other American raptor except the golden eagle. Mammals including mice, rats, moles, shrews, squirrels, pocket gophers, rabbits, opossums, muskrats and weasels make up 70 to 85 percent of their diet.

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owned land in Franklin County where we enjoyed many outings that precipitated my enthusiasm in looking for bittersweet. I have been a basket maker since retiring and like using the bittersweet vine in making rustic baskets.

Please let Mr. Johnson know I am an ardent fan of anyone who writes so in-depth as he has done. The vine is endangered, I believe, but I gathered very sparingly.

*Gail Kommer, via Internet*

Thanks to Willoughby Johnson for the refreshing article "Bittersweet Morning" in the November issue of the *Missouri Conservationist*. I am not a quail or pheasant hunter, but I eagerly look forward to fall, with its crisp air, changing leaves and the special treats of nature,

such as the bittersweet that grows here in rural Barton County.

My mom began an annual fall tradition in our family. After a great Sunday dinner of her famous fried chicken and apple pie, off we would go with our snippers in hand in search of bittersweet. Mom always knew where the good stuff grew. We would laugh, talk and enjoy the outdoors together, always careful not to take too much of the orange berries and vines, so there would be more next year.

I think the adventure of bittersweet gathering is more about the simple things in life. It is a natural thing to do, as if saying goodbye to summer and bringing a small piece of it into our homes to enjoy for months to come.

*Judy Gastel, Lamar*

*The letters printed here reflect readers' opinions about the Conservationist and its contents. Space limitations prevent us from printing all letters, but we welcome signed comments from our readers. Letters may be edited for length and clarity.*

## Ask the Ombudsman



**Q: I know hunters can use waterfowl decoys, but is it legal to use deer or turkey decoys?**

**A:** Yes, hunters may use deer and turkey decoys. The issue of decoys isn't specifically addressed in the Wildlife Code; however, decoy use has a long history as an accepted hunting tactic. Federal regulations prohibit live decoys.

Hunters should be very careful taking decoys to and from the field. It's a good idea to wrap them in hunter orange. Also, position yourself carefully once the decoy has been set up.

The matter of motion-wing decoys for waterfowl hunting is another question that comes up frequently. The Department of Conservation has done studies on the use of these items and has found that they increase the take (though by less than one bird per trip). There are no restrictions against using motion-wing decoys, and about 60 percent of Missouri duck hunters use them. A 2002 survey found that a similar proportion of hunters favor the use of motion-wing decoys as long as season lengths and bag limits are not affected.

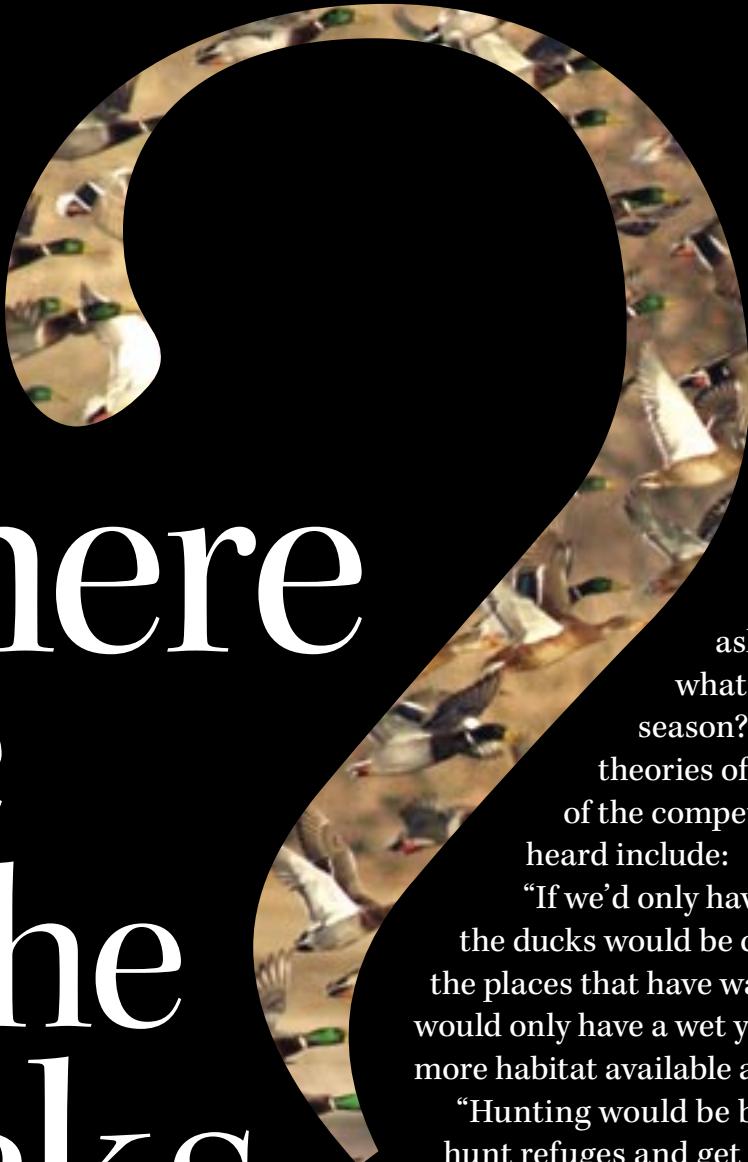
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# Where are the ducks

*Finding the connection  
between refuges, wetlands  
and better hunting.*

by Andrew Raedeke and David Gruber  
photos by Jim Rathert  
photo illustration by Susan Fine



"Where are the ducks?" hunters ask us each fall. "And what makes for a good season?" Yet most have theories of their own. Some of the competing ideas we've heard include:

"If we'd only have a dry year, then the ducks would be concentrated in the places that have water," versus, "If we would only have a wet year, there would be more habitat available and more ducks."

"Hunting would be better if we could hunt refuges and get the ducks to spread out," versus, "We need more refuges in our hunting area to attract more ducks."

And, "We have a hunting lease and can't compete with public areas and their big refuges," versus, "We're lucky to have a duck hunting lease close to a Department of Conservation refuge—it provides a source of ducks."



So which are correct? The above ideas stem from two opposing perspectives. One is that Missouri has reached its “carrying capacity” for migrating waterfowl. In other words, it has enough wetland habitat for the ducks that migrate through each fall. Hunters in this camp often blame poor duck hunting on refuges or the restoration of wetlands (private or public) that lure ducks away from their favorite hunting spots.

The other perspective is that Missouri has not reached its “carrying capacity” for migrating waterfowl. Hunters in this camp believe that if we restore more wetlands or create more refuges, Missouri will attract more ducks and have better hunting.

After hearing from hunters on both sides of the issue, we decided to take a more in-depth look at how restoring wetlands and adding refuges has affected duck hunting in Missouri.

## Wetlands: Past, Present and Future

Missouri’s wetlands serve the vital function of providing migrating waterfowl a place to rest and replenish energy reserves lost in flight. This recovery takes time. To illustrate, a duck flying nonstop from North Dakota to Missouri requires about 14 days to recover the fat reserves expended in flight. If ducks lose too much weight in migration, they reach their southern wintering grounds in poor shape and are less likely to successfully produce ducklings the following spring.

Although wetlands in mid-latitude states are critical for migrating ducks, most of them have been

destroyed or drained. Less than 15 percent of the historic wetlands remain in Missouri, Kansas and Illinois, compared to about 50 percent in the breeding grounds and wintering grounds. Wetland

habitat from north to south now resembles an hourglass.

To the north, the breeding grounds in the Dakotas, Minnesota and Wisconsin are dotted with

nearly 20 million acres of wetlands. Even more wetlands are found on the prairies in southern Canada.

The mid-latitude states of Missouri, Kansas and Illinois represent the bottleneck in the hourglass with only 2.3 million acres of wetlands. This region is bound by the Missouri River and its tributaries to the west and the Mississippi River and its tributaries to the east. States to the south still have 19 million acres of wetlands.

So what does this bottleneck and the loss of habitat mean for the millions of ducks that migrate south each fall? Missouri accom-

modates about 32 million duck-use days (a duck-use day equals the number of ducks times the number of days they are here) each fall. The region that produces the ducks that migrate through Missouri has a breeding population of about 19 million ducks. In a normal production year, a fall flight of about 38 million would be expected. If all of these ducks stopped in Missouri for just 10 days, we would support nearly 400 million duck-use days!

Of course, not all ducks from this region migrate over Missouri. But it does suggest that Missouri has much more potential to accommodate more than the 32 million duck-use days it now supports.

## Effects of Adding Wetland Habitat

Another way to see if Missouri has reached its carrying capacity for migrating waterfowl is to review how ducks have responded to the restoration of wetlands in Missouri. In the last 15 years, the Department of Conservation has restored more than 25,000 acres of wetlands, and the Natural Resource Conservation Service (NRCS) has restored an additional 100,000 acres on private land. The ducks have responded.



Missouri wetlands allow green-wing teal and other ducks to restore fat reserves.



**Increasing wetlands in Missouri will allow more migrating ducks, like these mallards, to spend time in the state.**

The number of duck-use days on managed state and federal wetland areas in Missouri jumped from an average of 21.2 million in the 1970s to 32.1 million from 1994–2004.

Hunters have reaped the benefits. Before these restorations, the statewide harvest topped 300,000 only once from 1961–1996. Since 1997, the harvest has never been below 300,000, and it frequently has topped 400,000. Missouri's share of the flyway harvest has increased from about 3 to 4 percent to 6 percent.

But have these restorations been too much of a good thing? Have we restored so much habitat that new habitat is now pulling ducks away from existing habitat? This does not appear to be the case.

Eight of the top 10 counties for duck harvest in the 1960s were in the top 10 in the 1990s. The proportion of harvest on public and private

land has remained steady over the last 10 years, with only 15 percent of the annual harvest occurring on Department of Conservation managed wetland areas.

In most regions where we restored wetlands and added refuges, harvest and duck numbers on the existing areas remained steady. The new areas have attracted more ducks to these regions. For duck hunters, this has translated into more hunting opportunity and improved harvest.

### **Wet vs. Dry Years**

Wet years give us a glimpse of what might occur if we could restore more wetland habitat. In the fall of 1998, the Missouri River flooded in central Missouri and created an abundance of shallow water habitat in the region around Eagle Bluffs CA. Hunters reported excellent hunting on the habitat created by

the floods, and Eagle Bluffs held a record number of ducks.

A similar set of circumstances occurred around Schell-Osage CA and Truman Reservoir during the fall of 2004. Timely rains caused Truman Reservoir to rise, creating an abundance of habitat. As a result, Schell-Osage held more ducks than it had in several years and hunters on nearby Truman Reservoir reported great hunting.

These cases suggest that ducks don't just spread out from managed public wetlands when more habitat is available. The additional habitat actually attracts more ducks to the region and improves hunting for hunters on both public and private lands in the region.

### **Quality vs. Quantity of Wetlands**

Hunters who feel we have too much habitat also point to the many



have too much refuge here in Missouri.

To answer this question in Missouri, we examined the relationships among refuge size, duck numbers and harvest. The results indicated that areas with large refuges held the most ducks and supported the highest harvest.

The importance of refuges became more apparent when we factored in the additional “refuge” provided on areas that allowed only half-day hunting. Furthermore, the results suggested that if ducks don’t have adequate refuge, they will leave the area.

Our analysis also revealed that, at some

areas, harvest was not as high as we expected based on refuge size. The harvest at Ted Shanks CA, for example, was much lower than our statistical model predicted. We expect that this result was due to the loss of bottomland forest and lack of food. The Department of Conservation is now aggressively

**Studies have shown that increasing wetland habitat in Missouri results in higher numbers of ducks visiting the state. This results in more hunting opportunities and better harvest.**

ponds and reservoirs that have been built in the last 30 years. However, these lakes and ponds provide a very limited amount of food. Wetlands that have more food tend to attract more ducks.

Ducks require a diversity of food sources to obtain adequate amounts of protein, lipids, minerals and vitamins. Many native wetland plants supply ducks with these resources. Corn also can serve as an important source of food. It provides a great source of energy, but lacks other essential nutrients necessary for a duck to survive.

Managers strive to provide a variety of food resources. During a typical year, the Department of Conservation leaves fewer than 500 acres of flooded standing corn in refuges statewide and around 1,000 acres of flooded corn in wetlands that are hunted. Ducks use lakes, ponds and streams without food less frequently and for shorter periods.

## The Role of Refuges

Decades of research have demonstrated that refuges provide essential undisturbed habitat for ducks to rest and replenish energy reserves. When ducks face too much disturbance they often leave an area entirely.

For example, in states without much refuge, over half of the harvest often occurs within the first 10 days of the season. Hunters in these states frequently talk about areas being “burned out” from too much hunting pressure. What past research doesn’t tell us is if we have reached the point where we



**Research indicates that Missouri's waterfowl refuges contribute a great deal to hunter success.**

working to restore quality habitat at Ted Shanks CA.

## Strategies to Improve Success

The results of our study support the perspective that Missouri has not reached its carrying capacity for migrating waterfowl. We haven't witnessed a decline in harvest at Department of Conservation areas when new areas were added nearby.

Department-managed wetlands still account for only 15 percent of the statewide harvest. During years when we have additional habitat due to wet conditions, we tend to have more ducks and better hunting.

We did not find any evidence to suggest that Missouri's refuges are detracting from hunting. Instead, it

Although wetlands in mid-latitude states are critical for migrating ducks, most of them have been destroyed or drained.

appears that Missouri's refuges are one of the major factors contributing to hunters' success on both public and private lands.

So, if refuges and restored wetlands aren't to blame, what is causing poor hunting in some areas? Weather, hunting pressure, food and refuge mainly influence which wetlands are attractive to ducks. We can't control the weather, but we can improve duck hunt-

ing by limiting hunting pressure, growing quality food and providing adequate refuge.

When you're getting ready for next duck hunting season, take a look at your favorite spots and see if they are providing all of these ingredients. Is there a refuge of 200 or more acres within 15 miles? Is there a diversity of food available? Is hunting pressure in your immediate area limited, such as by half-day hunting?

If the duck population is up next year, the weather cooperates and you've answered yes to each of these questions, you should be in for a good season and there won't be any reason to ask, "Where are the ducks?" because you'll already know. ▲

The Conservation Department's wetland management strategy is targeted at getting more ducks to stay longer.



# The Threshold of Goneness

by David Urich  
illustrations by David Besenger

A survival manual for living peacefully with a non-hunting and fishing spouse.

Hunting and fishing have been lifelong hobbies for me that I have mostly shared with other male friends. As a younger man, I often asked my girlfriends if they wanted to go hunting with me, but only one, Jen, took me up on my offer.

At the time, I was living in Minnesota, and we went ruffed grouse hunting. She didn't hunt but was willing to walk along and keep me company. Soon after we started walking through the Aspen forest, I

spotted a ruffed grouse. It took flight, I fired, and it fell to the ground.

Naturally, I was proud of my wing shooting skills in the dense woods, but when I brought back the grouse for Jen to see, she broke out in tears. The hunt was over, but thankfully our romance blossomed and we were married soon after.

We moved to central Missouri to begin our lives together. I continued to hunt and fish while Jen developed other outdoor interests, including competition horse riding. My week-

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end trips away from home during the fall were tolerated, but as our family began to grow I could sense tension building with my absences.

Early in our married lives, it was my habit each year to open the hunting seasons with a muzzleloading deer hunt to northeastern Missouri. Then I would open the duck season with a trip to Audrain County, followed by the opening of the Missouri quail season to Mercer County. After that, I was off to west central Kansas for the opening day of the

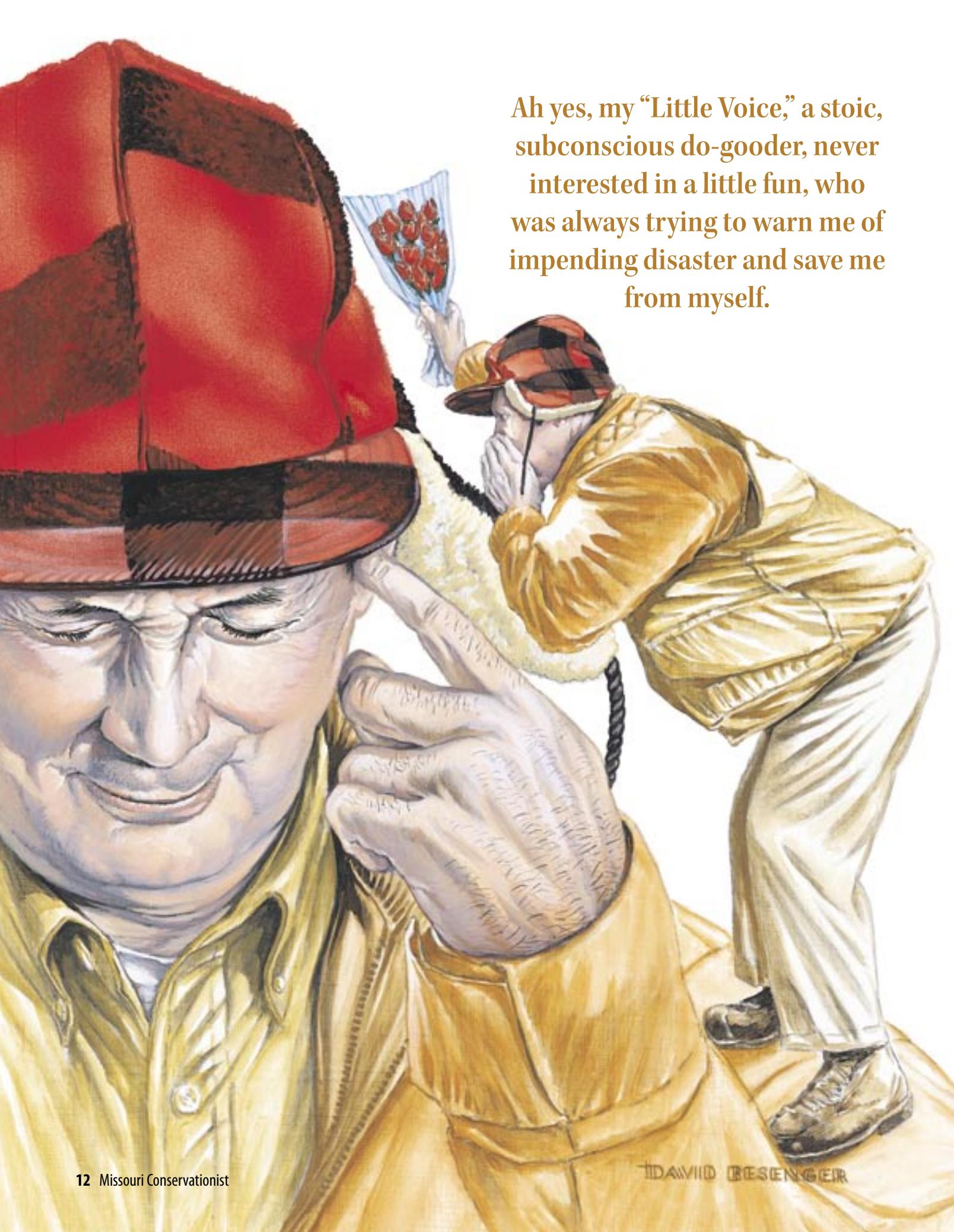
pheasant season. I cooled off the following weekend with a firearms deer hunt to northern Missouri. Mop-up involved several duck and quail hunts to round out the month of November and early December.

One year, as I was leaving for the firearms deer hunting portion of my fall hunting schedule, I noticed Jen standing on the back porch of the house holding the hands of our two very young sons. Jen was expecting our third son in about three months. There were tears streaming down her

cheeks as I rolled out of the driveway. My "Little Voice," naturally, popped up in the back of my mind and was screaming at me to stop, warning me I would be sorry if I didn't.

Ah yes, my "Little Voice," a stoic, subconscious do-gooder, never interested in a little fun, who was always trying to warn me of impending disaster and save me from myself.

During my adolescence, my "Little Voice" was constantly screaming at me in disapproval of my decision processes and behavior.



Ah yes, my “Little Voice,” a stoic, subconscious do-gooder, never interested in a little fun, who was always trying to warn me of impending disaster and save me from myself.

It told me many times that if I had just listened better, we would be routine guests on the TV show *Lifestyles of the Rich and Famous*, and there would be a lot less groveling on my part to make up for poor choices. This day was no different.

The hunter in me was driving, so needless to say, it was pedal to metal. Three days later, upon my return, there were issues. Things had changed drastically.

We began with a “Level III” lecture. These are massive, painful events lasting three days. They begin with 24 hours of the silent treatment. Then there are 24 hours of stern, serious expressions of discontent, copious tears, ample references to unrelated past events (to document a pattern of unacceptable behavior), quotes of support and warning from her mother, and shameless, serious groveling on my part. Then there are an additional 24 hours of silent treatment.

During this most recent unpleasant three-day event, the “Threshold of Goneness” was thoroughly defined and articulated. My absences for hunting and fishing trips would have an upper limit. I argued long and hard that trips associated for official work duties should not be included in the Threshold. But Jen explained that gone was gone, the reason was unimportant.

We also came up with the “Point System,” basically an earn-a-trip concept. This usually involved me slaving feverishly on home improvement and horse facility projects to earn away-time for hunting and fishing. The first full year of the Point System resulted in our house being featured in a national magazine specializing in old home restorations. Jen was thrilled, but the preparations almost killed me.

As you can imagine, I was generally dissatisfied with the

Point System. Points were hard to accumulate and peeled off way too easily. A late rules change resulted in behavioral transgressions on my part being assessed against the point total, much to the delight of my “Little Voice.” To make matters worse, bad behavior by my sons was also deducted from my goneness points, since Jen claimed that my sons’ behavior was influenced by, and related to, my own.

But eventually I learned to manage the Threshold carefully. I taught my sons basic home improvement skills like sanding drywall so they could make their own contribution to the point total. They were instructed on digging post holes and building fences to relieve Jen

**As you could imagine,  
I was generally  
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the Point System.  
Points were hard to  
accumulate and peeled  
off way too easily.**

of routine horse chores, an interest of her own that required full family participation.

I quickly learned that taking my sons on hunting and fishing trips provided Jen with mini-vacations, relieving her of certain motherhood responsibilities for a time. She fell into the habit of taking a winter vacation with her mother to Florida, which I converted to extra points.

Recently we took a two-week trip to Florida so she could take horse-back riding lessons from special instructors. I shamelessly exploited this commitment on my time and have added numerous hunting trips that have nearly returned me to the pre-Threshold golden years.

I also discovered that sending flowers to Jen’s workplace soothed the pain and inconvenience associated with my absences, especially for the longer trips. It took me some time to find the right florist who would deliver the flowers and walk them through the area where she worked for others to see. This has become such a tradition that her co-workers know that with the arrival of flowers, the hunting season has begun.

Since Jen’s co-workers rarely receive flowers, she takes extra pleasure in these deliveries. I supplement them with a few others throughout the year, just to keep her co-workers jealous of the attention. They speak highly of me, although I have never met most of them, and their favorable words to Jen help my overall goneness point total.

My sons are grown and moved out of the house now. I have to manage the Threshold differently. Jen used to look forward to me taking the boys hunting or fishing so she could have some quiet time at home. Now she tells me that she is lonely when I am gone.

I compensate by taking her on trips around the state, often overnight, so we can have quality time together. Occasionally, I will time my flower deliveries before or after one of these trips so her friends at work will notice how attentive I am.

As a hospital employee, Jen is surrounded mostly by other women at work. The key is to keep her co-workers envious of the attention and on my side. If they are making positive comments about my thoughtfulness, then I am accumulating points for my next hunting trip.

But sadly, I know now that if I had listened to my “Little Voice” 15 years ago, there would be no Threshold and I would not have spent the last decade and a half figuring out how to get around it. ▲



# CP33 Pay\$

**I** think helping quail is just what is right for my farm,” said Cass County farmer Jim Riffle. “After all these years of farming, it’s time I give them a little back.”

It’s no secret quail need help. Nationwide, northern bobwhite numbers have dropped from an estimated 59 million birds in 1980 to 20 million birds in 1999 and have continued to decline. Most experts

say habitat loss is the reason we don’t have as many quail as we once did. Other upland species, including many songbirds, with similar habitat requirements also are suffering.

Private landowners are the key to increasing upland species, and the new CP33 practice of the Conservation Reserve Program allows farmers to reap financial benefits for helping quail and other upland species. Giving a little back to quail can now pay off big.

## What is CP33?

CP33 is one of 27 Farm Service Agency Conservation Reserve Program (CRP) practices offered to agricultural landowners throughout Missouri. The CRP pays landowners on a per-acre basis over the length of a 10- to 15-year



The larger ear of corn was collected from the side of a fenceline buffered with CP33. The smaller one came from the opposite side, which had no buffer. Yields in the buffered areas were estimated at 168 bushels per acre, while yields in the nonbuffered side were about 45 bushels per acre.



contract to retire cropland and marginal pasture for resource conservation.

Missouri is one of six states given an enrollment allocation of 20,000 acres to enroll under CP33. The federal Farm Service Agency (FSA) administers CP33, which is titled "Habitat Buffers For Upland Birds."

The primary purpose of CP33 is to provide buffers around field edges adjacent to cropped areas.

CP33 requires that buffers be from 30 to 120 feet wide. The buffers can be allowed to regrow to natural cover or can be planted with a mixture of warm season grasses and forbs. Disking, burning or chemical application can be used midway through the contract to enhance the

habitat cover. Edge feathering of nearby trees and shrub plantings also enhances the habitat by providing cover.

Missouri studies have shown that quail are normally found within 70 feet of shrubby cover. CP33 buffers, which contain a combination of grasses, natural cover and shrubs, benefit quail by providing food, nesting habitat and protection from predators and harsh weather.

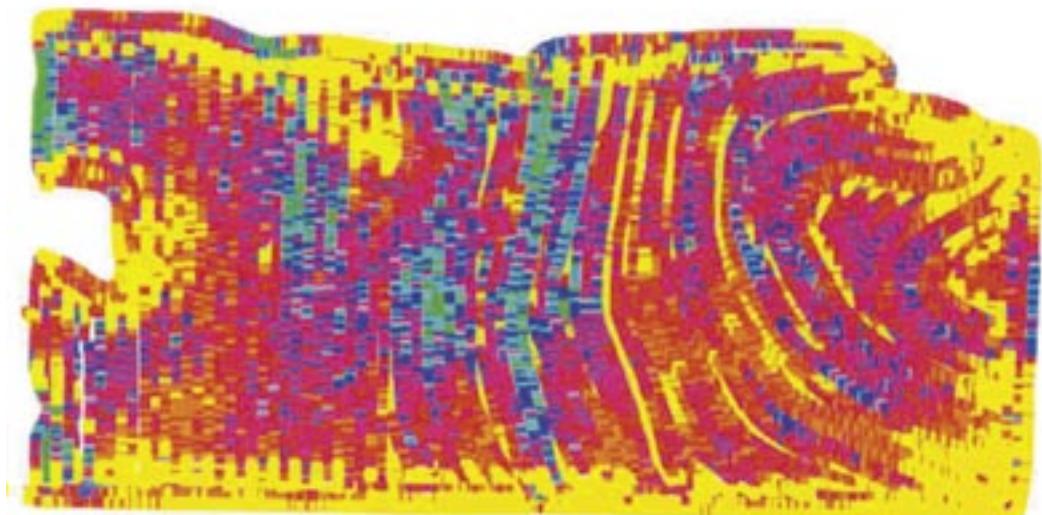
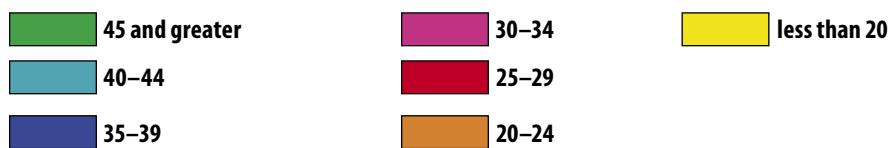
## How You Can Profit

The cost of establishing buffers is minimal. CP33 provides cost-share dollars to cover up to 90 percent of the expense of establishing the cover. Then, you reap rewards throughout the length of the contract.

If, for example, you installed a 120-foot buffer around a 40-acre field, you would be creating 13.2 acres of buffer. With an approximate contract value of \$80 per acre, you would be paid \$10,560 over the life of the contract. You would also receive the additional incentive payment of \$100 per acre that is now being offered to encourage enrollment.

Your farm profits would also increase if you maintain a buffer zone between your crops and nearby woodlands. These field edges typically have lower yields than the interior of a field. The 2005 drought highlighted the difference in yields. Last fall, the edges of many crops

## SOYBEAN YIELD—bushels per acre



This printout from a computerized combine-yield monitor shows the outside perimeter of the soybean field consistently has lower yields because of the sapping effect of the trees along the field edge.

bordered by woods dwindled or disappeared altogether, sapped by the demands of the nearby trees.

Even in nondrought years, trees bordering crop fields take their toll. Studies conducted by the University of Missouri have shown more than a 30 percent drop in soybean yield within 30 feet of a treeline. Yields approached normal only when the distance from crops to the trees at the field edge increased to more than 40 feet.

In the face of lower yields, it's hard to justify the cost of seed, fertilizer and herbicide for border areas.

A calculator devised by the Heartland Chapter of Quail Unlimited compares cropping income—taking into account the real-life costs of producing corn and soybeans—to possible CP33 income on your field. Assuming a 60 percent drop in yield along the first 30 feet of field edge, CP33 will increase profits from a 40-acre field by \$15,000 over the life of the 10-year contract. And, that's with a CRP rental rate as low as \$55 an acre.

For a look at the calculator, visit [www.coveyheadquarters.com](http://www.coveyheadquarters.com).

Making the most of a grant provided by the USDA Natural Resource Conservation Service, the Conservation Department and Quail Unlimited have teamed together to promote buffers in Cass and Andrew counties.

The collaborative effort is expected to result in more than 2,000 acres of prime quail habitat buffers in Cass and Andrew counties. Their work is already showing big dividends in terms of increased quail numbers.

## CP33 Successes

Cass County landowner Ron Highley is one of many farmers who have found that it's better to stop farming unproductive areas along the edge and get federal payment for it, instead.

"And, you're benefiting wildlife at the same time," Highley said. "CP33 creates a win-win situation."

CP33 success stories are cropping up wherever the practice has been implemented. One Cass County landowner reported seeing more quail within two months of establishing a buffer than he had seen in the last three years. Another said he was amazed at how quickly quail began using the edge-feathered areas along the CP33.

"There were not any quail in that hedgerow last year, or even two weeks before we started edge feathering," he said, "and now there are several pairs."

Quail Unlimited surveys verify this anecdotal information. The organization followed several CP33 plantings in Cass and Andrew counties in 2005. During early October, in the peak of fall quail covey calling, they found an average of four quail coveys on CP33 sites, versus no coveys on unbuffered sites.

CP33 also has been increasing quail numbers in other parts of Missouri. For example, a Saline County farmer told how, after flushing a 20-bird covey while mowing his CP33 area, he decided to drive through all 60 of his CRP acres.

## How to Enroll in CP33

The best way to start is to contact your Missouri Department of Conservation regional office and ask for assistance from a private lands specialist or contact your county Farm Service Agency office. They can tell you what CP33 can do for both your farm profits and for quail. Agricultural landowners can enroll acreage in CP33 year-round.

To be eligible, cropland must be suitably located and adaptable to the establishment of bobwhite quail. In addition, the applicant must satisfy the basic eligibility and cropping history criteria for CRP. These requirements are listed in the CRP fact sheet, available on FSA's Web site at [www.fsa.usda.gov/pas/publications/facts/html/crpcont03.htm](http://www.fsa.usda.gov/pas/publications/facts/html/crpcont03.htm).

### MDC Regional Offices

Southeast—573/290-5730

Central—573/884-6861

Kansas City—816/655-6250

Northeast—660/785-2420

Southwest—417/895-6880

Northwest—816/271-3100

St. Louis—636/441-4554

Ozark—417/256-7161



Crops planted right up to the treeline are usually stunted for several feet around the edges like the photo on the left. CP33 pays farmers to let these strips grow into natural cover like the photo on the right.

# No Doubting THOMAS

**Missouri's Thomas Hill Reservoir warms up winter days for anglers.**

by Tom Cwynar, photos by Cliff White

**Anglers may have a hard time believing**



**Hard-fighting hybrid striped bass reward anglers who brave frigid temperatures at Thomas Hill.**

that in the middle of winter they can find tons of feisty, actively feeding fish of all species within a stone's throw of a launch ramp, and that they'll find this wintertime action in a lake that actually warms them as they fish.

Those left doubting should take a trip to Thomas Hill Reservoir in Macon and Randolph counties. Parts of this 4,950-acre reservoir fairly steam all winter long. That's because the lake was built to provide cooling water for the Associated Electric power plant located on the lake's south end. When warm water discharged from the plant bumps cold arctic air a moist fog arises. If not dissipated by wind, the fog removes some of the chill from the air, even on the iciest days.





When it's really cold, the fishing itself can heat you up, according to Jeff Purcell, a Conservation Department protection district supervisor who drives from Brookfield to fish the lake when conditions are right.

"When it's 10 degrees and really bitter, that's when the fish move up into those warm areas," Purcell said.

The "warm areas" at Thomas Hill consist of the Brush Creek Arm in the lake's southeast section and the channel discharging from the power plant. The warm water, which might be in the 60s on even the coldest days, filters out past a small island at the mouth of the arm and eventually dissipates in the lake.

Purcell and his fishing partners target hybrid striped bass. These tough, determined fish follow schools of shad into the warm water. Purcell said hybrid fishing is best when the plant is pumping out lots of warm water. It's then that almost any bait will attract them.

"They put up an amazing fight," Purcell reported. "That's the reason we fish for them. We once weighed a 21-incher and it was 3 1/2 pounds, so any legal fish (longer than 20 inches) is going to weigh nearly 3 pounds."

Purcell also fishes other lakes for hybrids. He says the traditional methods of trolling rattling lures and casting crankbaits don't work very well at Thomas Hill, at least in the warm-water arm in winter.

"The best approach is more like a catfish method," Purcell said. "We almost always anchor. We look for fish



Successful anglers use depth finders to locate schools of hybrids in the warm winter waters at Thomas Hill.

## Some of the most exciting fishing comes when schools of hybrids herd schools of shad near the surface.

on the depth finder or maybe some kind of dip, where the water might go from 4 feet down to 6 feet and back to 4 feet again."

When Purcell and his buddies find a good spot, they'll position the boat to fish it properly and remain there for a while, because the schools of hybrids seem to be constantly on the move. "When a school goes through, a lot of times you'll have two rods go down at once."

In the warm-water arm, Purcell and many other anglers often gob chicken liver or bait shrimp on their hooks. The aromatic baits also attract channel cats, usually small ones that wear the bait off the hook.

"You can tell the difference," Purcell said. "With small catfish, your rod tip will be sitting there bouncing. If you set the hook on the bounce, you're not doing anything but ripping the bait off the hook."

He said hybrids take the bait much more aggressively. "They may hit it once," he said, "but usually you better have your rod in your hand or have it hooked into the boat good because the big ones will just take it clean out. We've lost one or two rods and came close to losing more."

Purcell likes a 7-foot or longer rod equipped with an open-faced or bait-casting reel spooled with 8- to 12-pound line. He said the long rod and strong line helps guard against the fish breaking off when it goes on a long run. He cautions anglers not to set the drag too tightly.





"If you lock down on them on their initial run, a 3- or 4-pounder will break your line pretty much every time," he said. "Even if they come back to the boat, you better be ready because when they realize something's wrong, they're gone."

Hybrids also will snap up jigs with tubes or plastic baits. Purcell thinks the fish will often go for a different color than the millions of shad they see. He prefers chartreuse or black and chartreuse. He and his fishing partners have tried fishing with shad themselves, but he said they had no success.

## Jump-fishing Hybrids

Delane Green, a former mail carrier who lives on the lake, said he catches hybrids all year long. He said some of the most exciting fishing comes when schools of hybrids herd schools of shad near the surface.

**Jeff Purcell is among many anglers who hit the lake when the temperature dips. Hybrids are very active in the warm water, requiring anglers to keep a tight grip on their rods.**

"It usually happens in June and July when the young shad are an inch or two long," Green said. "The hybrids get them up on those points that come up from deep water and bust them up—just tear into them!"

The feeding sprees create a disturbance that's easily visible in late afternoon and early evening when the water is still. Green usually fishes for crappie, but whenever he spots hybrids feeding near the surface, he puts down his crappie rod and quickly motors alongside the disturbance.

"The hybrids are getting big," Green said. "I saw one that weighed 13 ½ pounds last spring. I usually keep a stouter rod with a 3- to 3 ½-inch Sassy Shad handy. You cast anything silvery in there, and they're going to hit it."

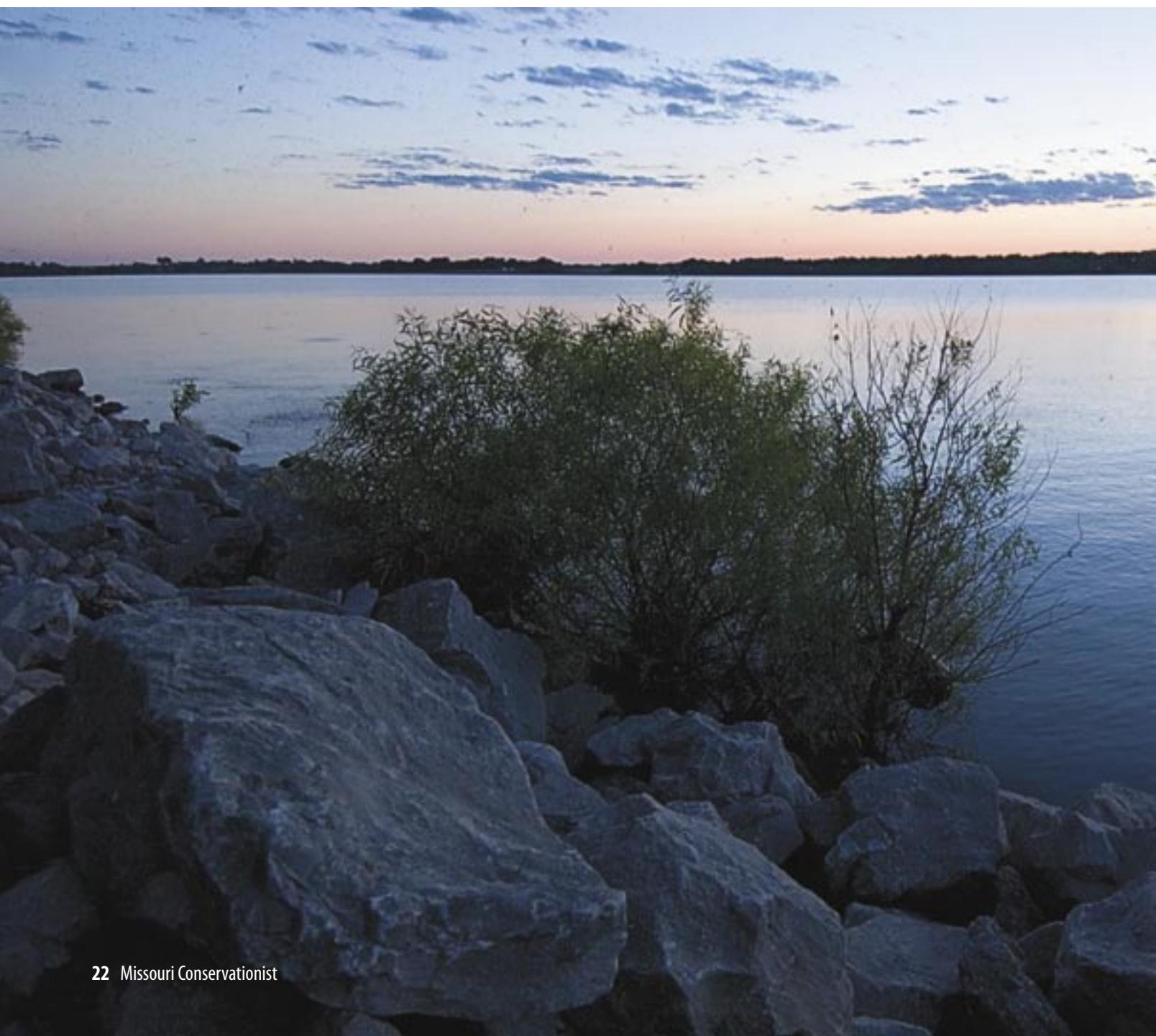
Green said seagulls sometimes swarm above hybrids feeding on the surface to eat shad injured or disoriented in the melee. “If you see where a bunch of gulls are feeding, you need to race over there,” he said.

### A Shore Thing

Green seldom bothers to launch his boat in the winter. He said most days he can easily catch a limit of crappies from the banks of T Road, a mere quarter of a mile from his home.

“A few years ago, hardly anyone fished up here because they thought all the crappie would be in the warm-water

**“We started putting in some brush piles—15 or 20, all total—and we found a lot of crappie are staying in those brush piles.” —Delane Green**



arm in winter," Green said. "Then we started putting in some brush piles—15 or 20, all total—and we found a lot of crappie are staying in those brush piles. "We caught a lot off the road the last two or three winters," he said.

According to Green, unless the winter is very cold, the bridges ice in for only a week or two each winter. The rest of the time, anglers are able to fish from shore.

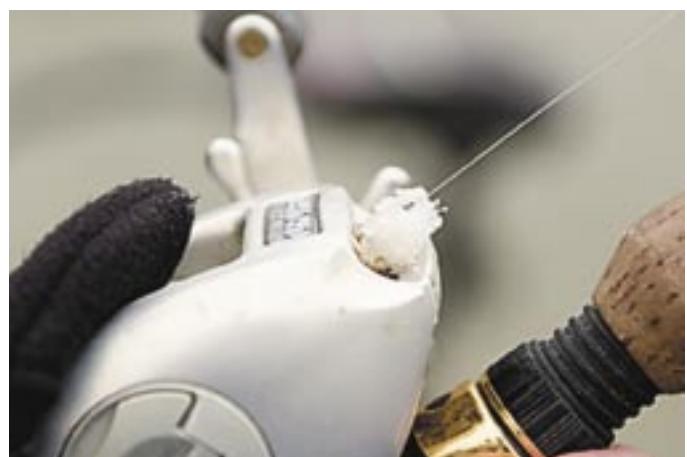
The brush piles aren't marked, but it doesn't take long to learn where they are. Green said he usually fishes a sixteenth-ounce tube jig with a blue head and a silver flecked clear tail from 7–12 feet below a cork.

"If there's a chop, that'll twitch it enough," Green said, "but if it's still, I'll wiggle it a little bit."



## Thomas Hill Practicalities

- Winter fishing, even in warm water can be dangerous. Wear your life jacket. Even if you don't have an emergency, it can help keep you warm.
- Boat ramps at Thomas Hill can be tricky in cold weather. Runoff from boat trailers ices up the ramp, making it too slippery to launch a boat. Check for traction before launching or retrieving boats. People who fish Thomas Hill regularly have learned to bring salt or sand for use on icy ramps.
- Signs on shore mark brush piles placed by the Conservation Department. Lake Manager Mike Anderson has updated the map of Thomas Hill brush piles, including their GPS coordinates. For a copy, write to the Northeast Regional Office, Thomas Hill Map, 2500 S. Halliburton, Kirksville, MO 63501.
- If not quickly released, hybrids die soon after being caught. Handle fish carefully and try to keep the time they have to spend out of the water to a minimum. Bring a net to help you bring them aboard or to hold them in the water while you remove hooks.
- Hybrids also won't survive long on a stringer or in a livewell. Put the hybrids you plan to keep on ice to maintain the flavor and firmness of their flesh. After filleting hybrids, remove all reddish meat from the centerline and from beneath the skin.
- Be careful handling hybrids. Their sharp gill plates can flare out and inflict a nasty cut.



Unique conditions at Thomas Hill make for great winter fishing, but anglers find opportunities and success year-round pursuing crappie, bass, flathead and other species.

## Targeting Brush Piles

The Conservation Department has constructed numerous brush piles throughout the lake. Older brush piles are marked with green signs on shore. Bright yellow signs mark 11 of the old brush piles that the Department refurbished in 2005, as well as five new ones.

Mike Anderson, fisheries management biologist for the Conservation Department's northeast region, said the brush piles are 100–200 feet out from the signs on shore. "We put them in when the lake was a foot high," Anderson said. "If the water is low, you can see some of the brush sticking out of the water."

The brush piles are large, usually consisting of 10–15 big trees submerged in a large area. "Two or three boats could easily fish the same brush pile," Anderson said.

Bob Schultz of Memphis, Missouri, said he makes a milk run of the brush piles whenever he visits Thomas Hill. He said he usually launches at the north ramp, close to T Road, and works his way down the lake.

"If they're not hitting on one, I'll move," he said, "and I'll keep moving until I find something. There have been days when I haven't found anything, but that's awful rare."

He likes to fish a sixteenth- or eighth-ounce jig equipped with a fiber guard baited with a tube with some chartreuse in it. His favorite crappie rig is a 5 ½-foot-long rod and an open-faced reel spooled with 6-pound-test chartreuse Fireline.

"I usually fish 8–10 feet down, even in the winter," Schultz said. "The crappies are schooled up, and they'll get into those brush piles—it's just habitat, you know. Usually they are right in the brush piles or right on top of them, or at least close to them."

Schultz often fishes vertically, letting the jig down until it hits the brush. He then raises it a few inches and slowly

**"The crappie at Thomas Hill grow very quickly. There's a bunch of fish that are ready to jump over that 9-inch length."**

—Mike Anderson



moves it back and forth and up and down. He said some days he likes to cast beyond a brush pile, let the snag-resistant jig drop to the bottom and bring it back slowly.

"When it hits a limb, I'll just lift it up, and when I feel it coming over, I'll let it drop. They usually bust it when it comes off the limb and drops," Schultz said. "It just kind of twitches the line."

## Exceeding Expectations

"Thomas Hill is a well-balanced fishery," said Mike Anderson, who manages the reservoir.

"The only thing we stock there is hybrid striped bass, and fishing for them can be really good," Anderson said. "We've watched boats fishing the riprap where the warm-water discharge channel comes into the Brush Creek Arm



catch hybrid bass after hybrid bass, every other cast."

Anderson said last year Thomas Hill was identified as one of the top lakes in the state to fish for crappie. He said the word got out, and the lake received lots of fishing pressure during 2005.

"Crappie fishing is still going to be really good, except that we're not going to have the numbers of large fish that we had this year. But, that could change," he said. "There are a lot of small shad there, and the crappie at Thomas Hill grow very quickly. There's a bunch of fish that are ready to jump over that 9-inch length."

Bass anglers consider Thomas Hill a "numbers lake," which suggests that the fish don't run large. Anderson said that in recent lake surveys, two of every 10 bass sampled exceeded the legal limit of 15 inches.

Channel catfish also run small. Anderson believes

**Crappie fishing is especially good at the lake, due to an abundance of brush piles that have been constructed.**

there are just too many of them. Flathead fishing, on the other hand, is very good, especially in the summer when anglers bait trotlines with goldfish.

The lake also contains drum, carp, buffalo and bluegill. Although most anglers at Thomas Hill don't target these species, catching them while fishing for hybrids, crappie or largemouth bass makes a day more interesting.

"All in all, Thomas Hill is a great resource," Anderson said. "I encourage anybody in the doldrums of winter with cabin fever to put on a good set of warm clothes and get out on that warm-water arm. You don't have to go out very far. You can be fishing within 100 feet of the ramp, or you can just fish for crappie from shore." ▲



This summary of the Annual Report highlights the Conservation Department's accomplishments and expenditures from July 1, 2004, through June 30, 2005. These accomplishments are based on the three components of the Department's mission statement.

*To protect and manage the fish, forest and wildlife resources of the state.*

**Bagnell Dam/AmerenUE Settlement:** The settlement agreement asks the Federal Energy Regulatory Commission to adopt specific conditions to protect the fishery and wetland resources affected by the relicensing of Bagnell Dam/AmerenUE power generation utility. If accepted, the benefits to the natural resources, and the multi-billion dollar Lake of the Ozarks tourism industry, will extend for the 40-year life of the new license. At Lake of the Ozarks, fish kills will be minimized, critical habitats protected and adequate water levels retained. Water quality and habitat improvements will be provided for the 82 miles of the Osage River below Bagnell Dam.

**Mississippi River Sturgeon Regulations:** In cooperation with Illinois, Kentucky and Tennessee, the Department established new regulations on the commercial harvest of shovelnose sturgeon in the Mississippi River. These regulations are designed to protect the sturgeon population from overharvest due to the worldwide demand for caviar.

**Catfish Harvest Management Study:** In 2004, a 5-year catfish harvest management study was initiated to learn about flathead and blue catfish ecology and population dynamics. In 2005, more than 8,000 catfish were captured, tagged and released; it is the largest such study ever conducted. Monitoring

population and size-class changes will provide better information to manage these popular sportfish. The study will also look at spawning behavior and catfish movement.

**Healthy Forests:** Over 53,000 acres of forestland were actively managed during the 2004–05 fiscal year. Missouri's public forests are managed to promote forest health and sustainability. Additionally, managed forests provide opportunities for hiking, equestrian use, birding, hunting and numerous other activities.

**Conserving All Wildlife in Missouri:** The Comprehensive Wildlife Conservation Strategy was completed and submitted to the U.S. Fish and Wildlife Service. It is a federal requirement that will allow Missourians to obtain additional federal funds. The strategy describes the Department's plans for conserving native plants and animals and the habitats they depend upon.

**Quail and Grassland Bird Habitat:** The Department emphasized restoration of quail and grassland bird habitats on Department lands, implemented regional quail/grassland bird action plans, and identified prospective private landowner cooperatives within quail focus areas. Quail and bird population monitoring was implemented to evaluate management actions.

*To serve the public and facilitate their participation in resource management activities.*

**Telecheck:** The new Telecheck system allows hunters to check deer and turkey by phone or online. The Department estimates it will save \$500,000 a year with this system.

**Private Land Services** staff made 6,087 on-site landowner visits to offer technical assistance in the development of habitat management plans and handled 5,280 requests for wildlife nuisance and/or damage assistance, including 696 on-site visits.

**Share the Harvest:** Through this program, hunters, in partnership with established charitable organizations, donate deer meat to those in need. Conservation agents coordinate the Share the Harvest program with the Conservation Federation of Missouri. During fiscal year 2004–05, 5,161 hunters donated 275,374 pounds of venison.

#### Rural Volunteer Fire Department Grants:

Each year the Forestry Division, in cooperation with the U.S. Forest Service, provides grants to rural volunteer fire departments. In fiscal year 2004–05, 179 rural fire departments received over \$380,000 in grants that funded equipment, special clothing and training.

#### Cost-share Funds for Private Landowners:

Over \$1.1 million in cost-share funds were delivered to approximately 850 private landowners to implement beneficial habitat management practices targeting fish, forest and wildlife resources.

*"To provide opportunity for all citizens to use, enjoy and learn about fish, forest and wildlife resources."*

#### New Cape Girardeau Conservation Nature Center

opened May 2005 and focuses on southeast Missouri's unique habitats and history. Indoor exhibits include a beaver lodge, swamp, Native American artifacts and more. The outdoors offers ponds and walking trails through forested hills and wetlands.

**The "Learning Outdoors" Program** was initiated to better help Missouri schools teach children what it takes to keep our fish, forests and wildlife—all nature—thriving. Grants for field trips, outdoor classrooms and learning kits will be integrated with teaching units to meet the demands of student testing as well as the joy of learning.

**Deer Hunting:** Unlimited antlerless deer permits were available for many Missouri counties (249,518 permits sold) and many more no-cost any-deer and antlerless deer permits were made available free to resident landowners (325,353 permits). The Department annually conducts the Managed Deer Hunt Program providing an additional 73 hunts on state and federal lands. Urban deer harvest opportunities were expanded to maintain deer populations at homeowner-desired herd levels, while satisfying the desires of the growing number of urban hunters.

**Youth Hunting:** Youth-only portions of deer, turkey and waterfowl hunting seasons not only preserve family values related to hunting traditions, but create opportunities for youth to develop strong personal connections to nature.

# What the Money Bought—Fiscal Year 2005

**County Assistance Payments—\$1,339,405** Includes payments to Missouri's 114 counties for levee and drainage district taxes, forest cropland payments, payments in lieu of real estate taxes and county aid road trust payments. The five largest payments were to Shannon (\$104,514), St. Louis (\$52,529), Howard (\$48,215), Lincoln (\$43,618), and Holt (\$38,656) counties.

**Fisheries—\$11,278,187** Managed 897 lakes and 40 stream management areas for public fishing. Over 840,000 people bought fishing permits making fishing one of the most popular outdoor activities in Missouri. Fish hatcheries produced about 8.4 million fish, stocking many farm ponds, reservoirs and streams.

**Forestry—\$14,987,545** Fostered a healthy and growing forest resource. Examples include distributing 5 million seedlings for planting to nearly 13,000 landowners, developing 180 Landowner Forest Stewardship Plans, bringing an additional 29,000 acres under total resource management, managing 438,700 acres of public forest land, monitoring insect and disease threats, and facilitating development of the state's forest industry.

**Wildlife—\$15,106,140** Worked towards ensuring wildlife populations that are in harmony with habitat and human enjoyment. Managed 513,776 acres of public land and conducted programs to monitor game and non-game species, develop wetlands and restore wildlife.

**Resource Science—\$11,669,901** Provided the science-based information needed to effectively manage Missouri's natural resources. Resource Science monitors the status of Missouri's forests, fish, and wildlife, recommends conservation actions, evaluates these actions, and reports the results. In addition to surveys of fish and wildlife, more than 200,000 Missourians were contacted to determine their outdoor activities and opinions about conservation programs.

**Protection—\$13,470,876** Paid for law enforcement in every county as well as resource management, information, education and public service contact activities conducted by 167 conservation agents who directly contacted 513,792 people. A joint investigation with Iowa resulted in over 200 citations and in excess of \$36,000 in fines to individuals who unlawfully bought resident permits in both states. Conservation agents, along with 2,200 volunteer instructors conducted 1,072 hunter education classes, certifying 20,046 students.

**Outreach and Education—\$16,092,745** Sustained and nourished Missourians' connection to the outdoors by providing educational materials, schoolteacher contacts, outdoor skills programs, the *Missouri Conservationist* magazine, TV show, books, videos, informational programs, staffed shooting ranges and conservation nature centers.

**Private Land Services—\$6,766,496** Helped private landowners to achieve long-term conservation of natural resources and their land-use objectives. Delivered over \$1.1 million in cost-share funds to approximately 850 private landowners; provided on-site technical assistance to over 6,000 private landowners; improved habitat for quail and grassland songbirds on over 10,700 acres of private land; helped landowners enroll almost 6,800 acres into the Wetland Reserve Program; and assisted almost 5,300 private landowners in controlling nuisance wildlife.

**Administration—\$2,350,815** Paid for audits, legal counsel, planning, environmental coordination, local government assistance, summer help and general expenses and equipment.

**Administrative Services and Human Resources—\$27,243,693** Paid for human resources, federal reimbursement administration, hunting and fishing permit point-of-sale system, fiscal services, distribution center, print shop, fleet management, vehicle and equipment maintenance centers, and information management and technology. Also includes other agency appropriations, Department-wide equipment and other essential services.

**Construction and Development—\$16,242,558** Work included fish hatchery improvements, development of nature centers, river accesses, wetlands, shooting ranges and renovation and repair of facilities statewide.

**Design and Development—\$11,082,357** Paid for building and grounds maintenance, engineering and architectural services.

## Receipts



Conservation Sales Tax .....	\$96,524,659
Permit Sales .....	\$30,682,443
Federal Reimbursements .....	\$19,198,694
Sales and Rentals.....	\$7,257,446
Interest .....	\$768,589
Other Sources .....	\$2,687,792
Total Receipts .....	\$157,119,624

## Disbursements



Construction & Development.....	10.4%
Wildlife .....	9.7%
Forestry .....	9.6%
Administrative Services & Human Resources .....	17.5%
Protection .....	8.7%
Outreach & Education .....	10.3%
Fisheries .....	7.3%
Design & Development.....	7.1%
Land Acquisition & In Lieu of Taxes .....	3.3%
Private Land Services.....	4.3%
Resource Science .....	7.5%
Administration .....	1.5%
General Region Expenditures.....	2.8%
Total Cash Disbursements .	\$155,556,500

## Missouri State Budget



Health & Social Services .....	38.7%
Education .....	28.5%
Government Services.....	20.0%
Transportation .....	9.0%
Natural & Economic Resources.....	3.1%
<b>Conservation .....</b>	<b>0.7%</b>
Total State Budget .	\$19,797,280,324



Canada goose



## Tracking hellbender health

Citizens play an important role in conserving Missouri wildlife. Two Missourians have taken a particular interest in the hellbender, North America's largest salamander. Clifford Keith (above) of Tunas and Chris Liesman (below) of St. Louis both learned that the Conservation Department was interested in hellbender sightings, and both called herpetologist Jeff Briggler to share their knowledge of the giant salamanders.

Keith showed Briggler how riverside development is affecting hellbender habitat on the Niangua River. Liesman showed Briggler a previously undocumented hellbender site on the Gasconade River. Both of these citizen conservationists contributed valuable knowledge about the endangered animals.

For more information about hellbenders, visit [www.missouriconservation.org/nathis/herpetol/](http://www.missouriconservation.org/nathis/herpetol/) and click on "The Hellbender," or write to Missouri Department of Conservation, The Hellbender, P.O. Box 180, Jefferson City, MO 65102-0180, or e-mail [pubstaff@mdc.mo.gov](mailto:pubstaff@mdc.mo.gov).

## Workshops help Missourians solve goose problems

GeesePeace St. Louis once again is offering workshops to promote non-lethal ways of dealing with problem Canada geese. The workshops, co-sponsored by the Conservation Department, the Wildlife Rescue Center and the Humane Society of Missouri, promote an integrated approach to managing goose problems. The approach includes landscaping, no-feeding policies, population stabilization techniques and discouraging geese from frequenting homes, businesses, parks, golf courses and other areas. Eight workshops are scheduled for January and February. For more information, visit [www.geesepacestlouis.org](http://www.geesepacestlouis.org), or contact GeesePeace St. Louis, P.O. Box 6246, Chesterfield, MO 63006-6246, phone 314/567-2081.

## ORDER TREE SEEDLINGS WHILE SUPPLIES LAST

Missourians who want to make their land more productive for wildlife have a unique opportunity to pursue that ambition each year. George O. White State Forest Nursery has a large inventory of about 70 species of tree and shrub seedlings, including extra-large seedlings. At press time, they still had large seedlings of black gum, tulip poplar, green ash, baldcypress, pin oak and shumard oak, up to 4 feet tall. But these and many of their species are selling fast!

A new species offered this year is the Ohio buckeye. It is one of six species included in the Conservation Bundle, along with flowering and red-osier dogwood, American holly, shumard oak and eastern white

pine. Another unique offering this year is the Walnut Variety Bundle, which contains 30 seedlings of three black walnut varieties.

Bundles of 25 seedlings sell for \$3 to \$12. Orders are accepted through April 30. A full list of trees and shrubs available through the state forest nursery is available at [www.missouriconservation.org/forest/nursery](http://www.missouriconservation.org/forest/nursery). Call 573/674-3229 to request a catalog by mail.



George O. White State Forest Nursery





## **2C QUAIL CO-OP promotes community-based conservation**

In frontier times, neighboring families used to work together to harvest crops and work cattle. That same spirit of community cooperation is the goal of the 2C Quail Cooperative project in Caldwell and Carroll counties. The pioneers in this case are the Conservation Department, landowners and private conservation groups. If they succeed, they will get local quail restoration in high gear and create a model for other communities that want to bring back the bobwhite quail.

The 2C Quail Cooperative aims to focus the energy, expertise and financial resources of Quail Unlimited, Pheasants Forever, the National Wild Turkey Federation and the U.S. Fish and Wildlife Service in a two-county area. This

will enable qualifying landowners to get funding for 90 percent of certain management practices instead of the normal 75 percent.

The cooperative also encompasses two public-land Quail Emphasis Areas—Bunch Hollow Conservation Area (CA) in Carroll County and Bonanza CA in Caldwell County.

The Conservation Department plans to contact landowners in the cooperative



**Bobwhite quail**

area to provide information about the effort and invite them to field days and workshops where they can learn first-hand about conservation techniques the program promotes. For more information, call 660/542-3361, ext. 120, in Carroll County, 660/663-3703, ext. 133, in Caldwell County, 660/595-2444 at Grand Pass CA, or 816/271-3107 at Pony Express CA.

## **Bowhunters' annual conclave set for Feb. 3–5**

The United Bowhunters of Missouri will hold its annual festival and banquet at the Jefferson City Ramada Inn Feb. 3–5. Saturday events will include a silent auction, bow raffles, seminars, photo contest, taxidermy displays, bow makers, traditional archery equipment vendors and banquet keynote speaker Mark Baker. Advance tickets cost \$30 for adults and \$14 for youths 15 and younger. After Jan. 24, the prices are \$35 and \$18. Nonmembers can tour the display and vendor area for \$7. For more information, call Mike McDonald at 636/742-4947, Tom Dickerson at 573/243-7113 or Dennis Voss at 636/583-4096.

## **Deer hunters rebound after slow start**

The November portion of the 2005 firearms deer season got off to a slow start, but it finished in the top five of all time. Hunters checked just 102,545 deer on this year's opening weekend, down 23 percent from 2004. The decrease was attributed to windy, rainy weather and an unusual abundance of acorns.

More favorable weather and perseverance enabled hunters to make up for lost time in the remaining nine days of hunting. By season's end, the harvest tally stood at 205,460, down just 7.6 percent from the record of 222,329 set in 2004.

Hunters age 6 through 15 checked 10,577 deer during the 2005 youth hunt Oct. 29 and 30, and hunters in the St. Louis, Kansas City, Springfield and Columbia-Jefferson City areas bagged 1,838 deer during the urban hunt Oct. 7–10.





Cedar waxwing

## Habitat Hint: Cedar Lodge Bed and Breakfast

When cedar waxwings look for bed and breakfast, they are likely to head for the nearest eastern red cedar (*Juniperus virginiana*) tree. This native tree's heavy foliage offers nesting shelter during the summer, but it is especially popular in the winter, when other trees shed their leaves.

Cedars also set out a feast that attracts at least 20 species of birds. The cedar waxwing's name comes from its preference for the red cedar's waxy blue berries, which also attract foxes, opossums and raccoons.

When planting, remember that the red cedar is a "pioneering" species. It quickly takes root when birds drop its seeds on unused fields and other neglected areas. It can take over unless you burn such areas periodically or cut sprouts below the lowest branch. Also, remember that cedars are not suitable for planting near apple or crab apple trees, since they harbor cedar-apple rust, a fungus parasite that thrives where both cedar and apple trees are present.

For more information about landscaping with cedars and other native plants, visit [www.grownative.org](http://www.grownative.org), or call 573/751-4115, ext. 3833. For information about selecting the best trees for your site, visit [www.missouriconservation.org/forest/](http://www.missouriconservation.org/forest/), or call 573/751-4115, ext. 3117.—Barbara Fairchild

## "Yes, you CAN" contest promotes litter awareness

Missouri schools can win cash while helping building awareness of litter in the "Yes, you CAN" trash can decorating contest sponsored by the Missouri departments of Conservation and Transportation.

To enter, decorate a trash can, 33 gallons or larger, and place it in a prominent school location, such as a cafeteria, gymnasium or sports field. The design must include the No MOré Trash program logo and an anti-litter message or slogan.

The winning entry in each of three categories will receive a \$100 cash prize. A grand prize of \$500 will go to the entry judged best from all categories.

Entries must be submitted by schools. There is no entry fee. Schools are limited to one entry in each category: grades K–2, grades 3–5 and grades 6–8. The deadline for mailed entries is Jan. 27. Entries submitted electronically must be received by 5 p.m. Jan. 31.

For entry forms and full details, call 573/522-4115, ext. 3855, e-mail [nomoretrash@mdc.mo.gov](mailto:nomoretrash@mdc.mo.gov), or visit [www.nomoretrash.org](http://www.nomoretrash.org).



## "Rock snot" creeping up on Missouri's southern border

The latest alien invader to threaten Missouri has a name nearly as unpleasant as its potential effects.

Rock snot (*Didymosphenia geminata*) gets its common name from its yellow-brown, slimy appearance. Didymo, as it also is known, is a diatom that thrives in cold water. Collections of millions of the microscopic, single-celled plants form impenetrable mats that can cover miles of stream bottom, choking out native plants and animals. They threaten the natural balance that makes spring-fed streams and tailwaters below dams beautiful, diverse and productive.

The organism has become invasive even in its original home, northern Europe. One didymo cell is enough to start a new colony. This has enabled it to spread to Spain, Turkey, Russia, China, Pakistan, New Zealand, the West Coast of the United States and South Dakota. It recently turned up in the White River below Bull Shoals Dam in Arkansas.

Like the zebra mussel, rock snot can overwhelm native species and inter-

rupt the food chain that supports bass, trout, salamanders, frogs, birds and mammals. It can clog water intakes on marine motors, municipal water plants and electric power plants. Swimmers report eye inflammation after swimming in infested waters.

What can you do to avoid transferring rock snot and any other unsavory plants and animals from one body of water to another? The easiest preventative is to let items that have been exposed to water, such as boats, motors, paddles, waders, bait buckets, life vests and even pets, dry completely and then keep them out of water for at least 48 hours. It also helps to manually remove mud, vegetation and other potential contaminants.

More effective preventative measures include spray-washing with hot water or scrubbing with a solution made with 1 cup of chlorine bleach and a gallon of warm water. For more information about aquatic invasive species, visit [www.protectyourwaters.net/](http://www.protectyourwaters.net/).



## Smithsonian exhibit shows what Native Americans, pioneers ate

If you have ever been curious about what Native Americans and the Lewis & Clark expedition ate and how they cooked it, check out the Smithsonian Institution's traveling exhibit at the Sullivan Performing Arts Theater, located on The Sullivan High School campus, Jan. 14 through Feb. 25. The exhibit uses artifacts, photographs and demonstrations to illuminate the historical, cultural and natural aspects of food in America. Every Thursday during the exhibit's visit, conservation agents will present hands-on programs for students featuring wild game, edible wild plants and frontier food-gathering skills, such as hunting and trapping. For teacher's guides and scheduling, contact Paige Russell, 573/468-4588, or visit [www.keyingredients.org](http://www.keyingredients.org).

## Deer and turkey meetings in Southern Missouri

In January 6 public meetings will be held in southwestern and southeastern Missouri to discuss deer and turkey management. The department desires to gather public input on management options, which includes the possibility of expanding the 4-point rule to some southern Missouri counties. The 2 hour meetings will run from 7-9 p.m. at locations listed below. The agenda will include presentations from deer program leader Lonnie Hansen and turkey program leader Jeff Beringer as well as time for open public comment. Local conservation department staff will also be present to meet with the public.

### SOUTHEASTERN MEETING LOCATIONS

- ▲ **Piedmont, January 9**—at Clearwater Youth Center on Highway 34 , adjacent to Clearwater High School
- ▲ **Marble Hill, January 10**—at Marble Hill, Methodist Church on Highway 34 East
- ▲ **Perryville, January 12**—at Perryville Community Center at corner of Spring and St. Joseph (1 block off town square)
- ▲ **Cape Girardeau, January 18**—at Conservation Campus Nature Center in North Cape County Park

For more information contact the MDC Southeast Regional Office  
573/290-5730

### SOUTHWESTERN MEETING LOCATIONS

- ▲ **Eldorado Springs, January 23**—at the Legion Bldg. 1 block east of Main St. on Broadway
- ▲ **Clinton, January 24**—at the K-BLE Bldg. 1606 N. Water

For more information contact the MDC Clinton Office 660/885-6981

## Tree farmers to meet Feb. 24–25

The 26th annual Missouri Tree Farm Conference will be held at Columbia's Stoney Creek Inn Feb. 24–25. This year's theme is "Creating Value-Added Woodlands." The conference will include a full day of field activities at the University of Missouri Horticulture and Agroforestry Research Center at New Franklin. Participants will learn how to evaluate tree crowns and crop-tree management techniques. They will get to see "junk" logs turned into blanks for gunstocks and other items. Also on the agenda are quality deer management, specialty wood products, cedar marketing and new uses for small-diameter trees. For more information, contact Glenda Fry, 573/634-3252, [Glenda@moforest.org](mailto:Glenda@moforest.org), or visit [www.moforest.org](http://www.moforest.org).

## EXPLORE OUTDOOR POSSIBILITIES

More than a quarter of a million Missourians have discovered the fun of outdoor adventure through St. Louis County Department of Parks and Recreation programs. Now you can join them with the 2006 Outdoor Adventure/Gone Fishin' program guide.

The 60-page booklet lists classes and field trips that include fishing, hiking, canoeing, kayaking, camping, caving, nature programs and firearms training, as well as adventure trips that include paddling and fishing on Ozark streams and in Canada. Girl and Boy Scouts will find merit-badge training offered, too.

The fun starts this month and continues through December. The nationally recognized outdoor recreation program draws participants from all over Missouri. To receive a copy of the 2006 Outdoor Adventure/Gone Fishin' program guide, send your name and address to St. Louis County Department of Parks and Recreation, Queeny Park, 550 Wiedman Road, Manchester, MO 63011, [mkoch@stlouisco.com](mailto:mkoch@stlouisco.com), or call 636/391-3474.



# NEWS & ALMANAC

## Outdoor Calendar

<b>Hunting</b>	<b>open</b>	<b>close</b>
Coyotes	5/9/05	3/31/06
Crow	11/1/05	3/3/06
Deer		
Archery	11/23/05	1/15/06
Furbearers	11/15/05	2/15/06
Pheasant		
North Zone	11/1/05	1/15/06
Quail	11/1/05	1/15/06
Rabbits	10/1/05	2/15/06
Ruffed Grouse	10/15/05	1/15/06
Squirrels	5/28/05	2/15/06
Turkey		
Archery	11/23/05	1/15/06
Spring	4/24/06	to be announced
Waterfowl	please see the <i>Waterfowl Hunting Digest</i> or see <a href="http://www.missouriconservation.org/hunt/wtrfowl/info/seasons">www.missouriconservation.org/hunt/wtrfowl/info/seasons</a>	

### Fishing

Black Bass (certain Ozark streams)	5/28/05	2/28/06
impoundments and other streams year round		
Bullfrog	sunset	midnight
	6/30/06	10/31/06
Gigging Nongame Fish	9/15/05	1/31/06
Trout Parks		
catch and release (Fri.–Sun. & daily at Maramec spring)		
	11/11/05	2/12/06

### Trapping

Beaver	11/15/05	3/31/06
Furbearers	11/15/05	2/15/06
Otters and Muskrats	11/15/05	varies
see regulations for otter zones season dates and limits		

For complete information about seasons, limits, methods and restrictions, consult the *Wildlife Code* and the current summaries of "Missouri Hunting and Trapping Regulations" and "Missouri Fishing Regulations," the "Fall Deer and Turkey Hunting Regulations and Information," the "Waterfowl Hunting Digest" and the "Migratory Bird Hunting Digest." This information is on our Web site at [www.missouriconservation.org/regs/](http://www.missouriconservation.org/regs/) and at permit vendors.

The Conservation Department's computerized point-of-sale system allows you to purchase or replace your permits through local vendors or by phone. The toll-free number is 800/392-4115. Allow 10 days for delivery of telephone purchases. To purchase permits online go to [www.wildlifelicense.com/mo/](http://www.wildlifelicense.com/mo/).

## AGENT NOTEBOOK

### Training is extremely important

to Missouri's conservation agents.

Immediately after being hired, each new agent completes six months of intense training in the Conservation Department's Conservation Agent's Training Academy.

Upon graduation, agent trainees are well versed in the subjects of wildlife and constitutional law, human behavior, patrol techniques, criminal investigation, first aid, self defense tactics, firearms safety, water safety, wildlife identification and wildlife management.



After being assigned to the field, each conservation agent is required by The Missouri Department of Public Safety to complete a minimum number of in-service training hours to remain certified as peace officers. This training focuses on criminal law and legal issues, cultural diversity, ethics, conflict management, victim sensitivity, stress management, first aid and CPR, defensive tactics and firearms and driver proficiency.

In addition, agents are continually provided information and training to keep them updated and current on changing wildlife regulations and wildlife management practices. Agents also must stay tuned to the constantly evolving society in which they work. The intense and continuous education of agents helps them to achieve their goal of protecting and conserving Missouri's fish, forest and wildlife resources and serving citizens through a coordinated program of resource law enforcement, education, information and one-on-one contacts. —Bill Stimson, District Supervisor



To learn about bobwhite quail management and Missouri's quail recovery efforts, check out  
[www.missouriconservation.org](http://www.missouriconservation.org)  
Keyword: quail



"He always puts it up like that before he tucks in for winter."



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# Program Schedule

Television the way Nature intended!



## SHOW SCHEDULE

### Dec 31, 2005 & Jan 1, 2006—**HUNTING**

Travel the state throughout the year and catch the action as hunters pursue duck, squirrel and deer.

### Jan 7 & 8—**YOUTH DEER HUNT**

This show includes a mixture of hunting, shooting and wildlife art.

### Jan 14 & 15—**TIMBER RATTLER**

We'll take you on a hike, on a hunt and track rattlesnakes.

### Jan 21 & 22—**SOUTHEAST STORY**

Take a closer look at the people and the land of southeast Missouri.

### Jan 28 & 29—**JUST KIDDIN AROUND "WHITEWATER"**

Follow the action during the Missouri Whitewater Races in this special edition for kids.

### Feb 4 & 5—**WOMEN IN NATURE**

Discover programs in outdoor skills and education.

## OTHER OUTLETS

(Previously aired episodes are also shown on the following)

Blue Springs CTV7	Poplar Bluff Poplar Bluff City Cable
Brentwood BTV-10 Brentwood City Television	Ste. Genevieve Ste. Genevieve Cable
Columbia Columbia Channel	St. Charles SC20 City Cable
Hillsboro JCTV	St. Louis Charter Cable
Independence City 7 Cable	St. Louis Cooperating Schools Cable
Joplin KGCS	St. Louis City TV 10
Kearney Unite Cable	St. Peters St. Peters Cable
Parkville GATV	Springfield KBLE36/MediaCom
Perryville PVTV	Sullivan Fidelity Cable
Platte City Unite Cable	West Plains OCTV

# Meet Our Contributors



**Tom Cwynar** is both a writer and an editor for the *Conservationist*. He hails from Michigan, but has lived in Missouri long enough to have enjoyed fishing most of our major reservoirs from what he calls, "The Little Yellow Boat That Could." His primary tools for enjoying the outdoors are a fishing rod, tent and canoe.

**David Gruber** has wanted to be a waterfowl biologist since he was a kid. Much of his work has involved Canada geese, including annual banding operations since the mid 70s. When not at work, you may find him at his hobby farm in Monroe County, boating the Missouri River, or enjoying other outdoor sports.



**Michelle Motley** lives with her husband, Bill, and her son, Jonathan, on a farm near Rocheport, Mo. She is a program specialist in conservation with the Missouri Farm Service Agency. In her free time, she enjoys bicycling, riding horses and spending time with her family and friends.

**Andrew Raedeke** lives with his wife, Nikki, and their three dogs in Columbia. As a resource scientist with the Conservation Department, he is often involved with waterfowl research and is noted to be particularly adept at counting birds from a bouncing airplane. Hunting and fishing occupy his remaining free time.



**David Urich** is the Wildlife Division's Ozark unit chief and a 27-year employee with the Conservation Department. He lives on a 40-acre farm in Moniteau County where he and his wife, Jennifer, raised three sons. Rabbit hunting with beagles and basset hounds and fishing are among his many hobbies.

**Bill White** is a private land programs supervisor for the Conservation Department in Jefferson City. He coordinates Department efforts to implement forest, fish and wildlife aspects of USDA Farm Bill Programs. His hobbies include quail hunting, camping and keeping up with four sons.





## Lap of Luxury

A Lapland longspur forages for seeds along a plowed roadside following a deep snowfall. These small, sparrow-like birds nest in northern Canada and migrate to the central plains of the US where large flocks winter in agricultural fields.—*Jim Rathert*